

CLAIMS

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1. A rotating electric machine incorporating a stator (1) with windings drawn through slots (5) in the stator, **characterized** in that the windings consist of high-voltage cable (6) and in that at least one of said slots (5) at at least one end surface of the stator (1) is provided with cuff means (13, 16) arranged between the cable (6) and the slot (5), said cuff means extending axially a short distance into the slot.
2. A rotating electric machine as claimed in claim 1, wherein said cuff means (13, 16) comprises a cuff extending in radial direction over a plurality of cable lead-throughs, preferably all of them, and having a profile in radial section that substantially corresponds with the profile of the slot.
3. A rotating electric machine as claimed in claim 1 or 2, wherein said cuff means comprises a plurality of cuffs, circular in a radial section, each cuff surrounding a cable lead-through.
4. A rotating electric machine as claimed in any of claims 1-3, wherein the slot has a profile that, in a radial section, has wide parts (7) and narrow parts (8).
5. A rotating electric machine as claimed in any of claims 1-4, wherein the cuff means (13, 16) is made of an elastic material.
6. A rotating electric machine as claimed in claim 5, wherein said material is free from oil and preferably consists of silicon rubber.

7. A rotating electric machine as claimed in any of claims 1-6, wherein the cuff means (13, 16) has an axial extension of 2-6 cm and its axially outermost end is situated immediately inside the end surface (19) of the stator.

8. A rotating electric machine as claimed in any of claims 1-7, wherein the cuff means (13, 16) is provided at its axially innermost end with a collar (16) protruding into a recess (17) running in a radial plane in the walls of the slot.

9. A rotating electric machine as claimed in any of claims 1-8, wherein the cuff means (13, 16) around each cable lead-through has an inner profile (14) with a least diameter corresponding substantially to the outer diameter of the cable (6) and expanding conically towards the end plane (19) of the stator.

10. A rotating electric machine as claimed in any of claims 1-9, wherein the cuff means (13, 16) is arranged to abut sealingly against both slot wall (5) and cable (6).

11. A rotating electric machine as claimed in any of claims 1-10, wherein the cable (6) is of a type comprising a core with a plurality of strand parts (31), an inner semiconducting layer (32) surrounding the core, an insulating layer (33) surrounding the inner semiconducting layer, and an outer semiconducting layer (34) surrounding the insulating layer (33).

12. A rotating electric machine as claimed in claim 11, wherein the high-voltage cable (6) has a diameter within the interval 20-200 mm and a conducting area within the interval 80-3000 mm².

13. A rotating electric machine as claimed in claims 11 or 12, wherein the winding is flexible and in that said layers are in contact with each other.
- 5 14. A rotating electric machine as claimed in claim 13, **characterized** in that said layers consist of materials with such elasticity and such a relation between the coefficients of thermal expansion of the materials that the changes in volume in the layers caused by temperature fluctuations during operation are absorbed by
10 the elasticity of the materials so that the layers retain their adhesion to each other at the temperature fluctuations occurring during operation.
- 15 15. A rotating electric machine as claimed in claim 13 or claim 14, wherein the materials in said layers have high elasticity, preferably with an E-modulus less than 500 MPa, most preferably less than 200 MPa.
- 20 16. A rotating electric machine as claimed in any of claims 13-15, wherein the coefficients of thermal expansion for the materials in said layers are of substantially the same magnitude.
- 25 17. A rotating electric machine as claimed in any of claims 13-16, wherein the adhesion between the layers is of at least the same magnitude as in the weakest of the materials.
- 30 18. A rotating electric machine as claimed in any of claims 13-17, wherein each of the semiconducting layers essentially constitutes one equipotential surface.
- 35 19. A method of manufacturing a rotating electric machine incorporating a stator with windings drawn

through slots in the stator, **characterized** in that the machine is wound with high-voltage cable and cuff means are applied in at least one of said slots at at least one end surface of the stator, so that the cuff means extend a short distance into the slot, the inner dimensions of said cuff means permitting passage of the cable, after which the cable is wound in the slots through the cuff means.

10 20. A method as claimed in claim 19, wherein the cuff means is lubricated with an anti-friction agent before the cable is passed through them.

15 21. A method as claimed in claim 19 or claim 20, wherein the cuff means applied is in accordance with the embodiments defined in any of claims 1-10.

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